

AMENDMENTS TO THE CLAIMS

1. (Previously Presented) Cup-shaped hydraulic piston made from rolled sheet metal, comprising
  - an open end,
  - a side wall with a cylindrical outer surface and an inner surface, wherein the side wall at its outer surface is provided with an annular groove in a portion adjoining the open end, and
  - a piston head,wherein a portion of the inner surface of the side wall adjoining the open end and extending in axial direction over the annular groove has a cylindrical shape, and wherein the thickness of the side wall decreases monotonically from the portion of the inner surface up to the piston head.
2. (Previously Presented) Hydraulic piston according to claim 1, wherein the piston head is curved inwards.
3. (Previously Presented) Hydraulic piston according to claim 2, wherein the piston head is curved in a concave manner.
4. (Previously Presented) Hydraulic piston according to claim 2, wherein a radially outer part of the piston head has the shape of a truncated cone and a central part of the piston head has the shape of a spherical cap.
5. (Previously Presented) Hydraulic piston according to claim 4, wherein an extension of the truncated-cone-shaped part of the piston head along its profile is not greater than three times a wall thickness of the side wall in its portion adjoining the piston head.

6. (Currently Amended) Method of manufacturing a hydraulic piston comprising the steps:
  - punching a disk-shaped round blank out of a piece of rolled sheet metal;
  - deep-drawing the disk-shaped round blank into a cup shape by means of a bottom die and a punch;
  - stamping the cup-shaped blank to form a piston head and a cylindrical outer surface of the hydraulic piston; and
  - incorporating an annular groove into an outer surface of the hydraulic piston;  
piston;
  - whereby a portion of an inner surface of a side wall of the hydraulic piston adjoining an open end thereof and extending in axial direction over the annular groove has a cylindrical shape, and whereby a thickness of the side wall decreases monotonically from the portion of the inner surface up to the piston head.
7. (Previously Presented) Method according to claim 6,  
wherein the disk-shaped round blank during deep-drawing into a cup shape is pressed firstly by means of a first punch through a first circular die opening and then by means of a second punch through a second circular die opening, a diameter of which is smaller than a diameter of the first die opening.
8. (Previously Presented) Method according to claim 7,  
wherein the first punch and the second punch are cylindrical.

9. (Previously Presented) Method according to claim 7,  
wherein the cup-shaped blank is pressed by means of a third punch through a third circular die opening, a diameter of which is smaller than the diameter of the second die opening, wherein the third punch has a first cylindrical portion emanating from its free end and adjoined by a second cylindrical portion, a diameter of which is greater than the diameter of the first cylindrical portion and smaller than the diameter of the third die opening, in order to form a step in the side wall at the open end of the blank.
10. (Previously Presented) Method according to claim 9,  
wherein subsequent to deep-drawing into a cup shape a first stamping operation is effected to form an inwardly curved piston head in that a step-shaped punch comes into engagement with the step in the side wall of the blank and presses the blank into a bottom forming die.
11. (Currently Amended) Method according to claim 10,  
wherein subsequent to the first stamping operation the cup-shaped blank is pressed by means of another step-shaped punch, which comes into engagement with the step in the side wall of the blank, through a fourth circular die opening, a diameter of which is smaller than the diameter of the third die opening, in order to form the cylindrical outer surface of the side wall.
12. (Currently Amended) Method according to claim 11,  
wherein subsequent to forming of the cylindrical outer surface of the side wall a second stamping operation is effected by means of another bottom forming die and a further step-shaped punch, which comes into engagement with the step in the side wall of the blank, in order to form a transition region between the piston head and the side wall.

13. (Previously Presented) Method according to claim 12,  
wherein a region of the bottom die touching the piston head is cap-shaped in a centre and truncated-cone-shaped at an edge.
14. (Currently Amended) Method according to claim 12,  
wherein subsequent to forming of the transition region between the piston head and the side wall a third stamping operation is effected by means of a further bottom forming die and a yet another step-shaped punch, which comes into engagement with the step in the side wall of the blank, in order to form the final configuration of the piston head.
15. (Previously Presented) Method according to claim 6,  
wherein subsequent to forming of the annular groove at least the outer surface is subsequently machined, wherein the subsequent machining comprises at least one of the following steps:
  - grinding;
  - coating; and
  - polishing.
16. (Cancelled)